

Application No.: 10/809,737
Docket No.: PE0667 US DIV

JAN 16 2007

REMARKS

Status of the Application

Claims 1-7, 9, 10, 14-17, and 19-21 are pending. The pending claims stand rejected under 35 U.S.C. § 102.

Amendments to the Claims

Claims 1 and 21 are being amended to advance the prosecution by specifying that the at least one first comonomer has a formula selected from the group consisting of Formulae I and I(a). This amendment does not add any new matter, and will not require further examination.

*Claim Rejections – 35 U.S.C. § 102*Kim '864

Claims 1-7, 9-10, 14-17 and 19-21 are rejected under 35 U.S.C. § 102(b) as being anticipated by Kim et al., U.S. Patent No. 5,876,864. Applicants respectfully maintain their traverse of this rejection. To anticipate claims under review, the single prior art reference must disclose each and every limitation in the claims, in the order therein presented, and must enable the claimed invention. Kim '864 discloses a polymer described in the Abstract as a fluorene-based alternating polymer.

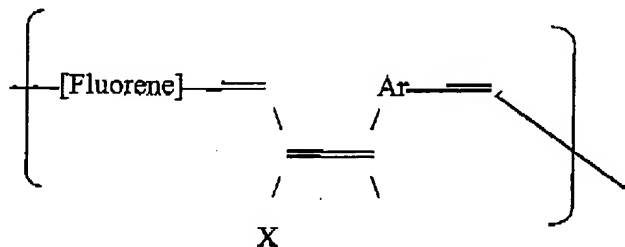
The present claims are directed to a copolymer having at least one fluorene-based comonomer having Formula I or Formula I(a) and at least one comonomer having a 6-membered heteroaromatic ring of Formula III (please see, e.g., claim 1), and as shown in the formulae, the linkages between both Formula I and Formula I(a) monomers and any other monomer is by single carbon-carbon bond. Similarly, the linkages between the Formula III monomer and any other monomer, represented by E in Formula III, is by single bond or a linking group selected from arylene or heteroarylene, both of which are bivalent radicals formed by removal of -H from two carbon sites on the aromatic nucleus, and thus also link to neighboring moieties via single carbon-carbon bonds. There is no acetylene bridge linkage, as in Kim '864, linking the fluorene moiety to another monomer or an end-capping group, as the case may be. In Kim '864, as shown in formula (I) the basic structural repeat unit (SRU) or backbone of the alternating polymer includes -≡Ar- on the right of the fluorene group, where Ar represents substituted or unsubstituted phenyl, and -≡ to the left of the fluorene group, as illustrated in the formulae shown at Col. 4, line 50 to Col. 7, line 5, as well as the acetylene group on each end of the SRU (also the Abstract, Col. 4, lines 17-23, and claim 1). Kim '864 does not disclose the single bond

Application No.: 10/809,737
 Docket No.: PE0667 US DIV

linkages between fluorene and/or non-fluorene-based comonomers as required in the present claims. Because Kim '864 does not disclose this significant structural feature of the claimed copolymers and, in fact, discloses a different structure, Kim '864 does not anticipate the pending claims. Applicants respectfully request that this rejection be withdrawn and not maintained further.

Kim '974

Claims 1-2, 4-7, 9-10, 14-17, and 19-21 are rejected under 35 U.S.C. § 102(b) as being anticipated by Kim et al., U.S. Patent No. 5,807,974. Applicants respectfully maintain their traverse of this rejection, also. Kim '974 also discloses a fluorene-based alternating copolymer (Abstract). Formula (I) in Kim '974 depicts an SRU that contains a fluorene group and a side chain,




Again, there is no there is no vinylene bridge between comonomers (here, fluorene and Ar) in the present claims. Like Kim '864, Kim '974 discloses a different structure than those of the present claims, having vinylene bridges between comonomers, a feature absent from the claims, and does not disclose single bond linkages between comonomers as required by the present claims. For these reasons, Kim '974 does not anticipate the pending claims. Applicants respectfully request that this rejection be withdrawn and not be maintained further.

Conclusion

It is respectfully submitted that none of the art of record anticipates the invention as claimed. The above amendments are made to put the claims into condition for allowance. A Notice of Allowability is respectfully requested.

Application No.: 10/809,737
Docket No.: PE0667 US DIV

Respectfully submitted,


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